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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,079	02/26/2002	Fu-Cheng Cheng	MR1841-51	2681
4586	7590	03/24/2004	EXAMINER	
ROSENBERG, KLEIN & LEE 3458 ELLICOTT CENTER DRIVE-SUITE 101 ELLICOTT CITY, MD 21043			LEE, EDMUND H	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/082,079

Applicant(s)

CHENG, FU-CHENG

Examiner

EDMUND H. LEE

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

### DETAILED ACTION

1. The disclosure is objected to because of the following informalities: a description of drawing section is missing. Applicant is cautioned against the insertion of new matter.

Appropriate correction is required.

2. Claims 1-3 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. A step of cooling by air or placement in water is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). According to the pg 7, lns 5-17 of the instant specification, the number of layers formed is determined by the method of cooling performed on the core removed from the mold. Cooling by air produces a core having 2 layers whereas cooling by water produces a core having 3 layers. Cooling by air or placement in water is essential to the instant invention.

3. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The phrase "materials...are blended...and vulcanized, and then molded in a compression mould" (cl 1, lns 2-3) is unclear as to whether or not the material is actually vulcanized before it is molded.

The phrase "the air" (cl 2, ln 2) lacks proper antecedent basis in the claim.

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The phrase "a construction...is produced directly" (cl 2, lns 2-3) idiomatically incorrect. If the construction is directly produced from the cooling in air of the compression molded core removed from the mold then it should be clearly and positively recited as such.

The phrase "the surface layer" (cl 2, ln 3) lacks antecedent basis in the claim.

The phrase "the water" (cl 3, ln 2) lacks proper antecedent basis in the claim.

The phrase "a construction...is produced directly" (cl 3, lns 2-3) idiomatically incorrect. If the construction is directly produced from the cooling in water of the compression molded core removed from the mold then it should be clearly and positively recited as such.

The phrase "the surface layer" (cl 3, ln 3) lacks antecedent basis in the claim.

The phrase "the intermediate" (cl 3, ln 4) lacks antecedent basis in the claim.

The phrase "the inner layer" (cl 3, ln 6) lacks antecedent basis in the claim.

Clarification and/or correction is required.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ladd et al (USPN 6417278) in view of the admitted prior art as set forth on pgs 2-3 of the instant specification. In regard to claim 1, Ladd et al teach the basic claimed process including a method of making three or four layers golf balls (col 8, lns 65-66; col 12, ln

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47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3); vulcanizing materials for a golf ball center/core (col 8, lns 65-66; col 12, ln 47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3); compression molding the materials under a set temperature for a set period of time (col 8, lns 65-66; col 12, ln 47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3); using a composition having polybutadiene, zinc diacrylate, peroxide, zinc oxide, and barites (col 8, lns 65-66; col 12, ln 47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3); compression molding the composition under 171C for 5 mins to form an integral core having a two or three layer construction with increasing hardness from inside out (col 8, lns 65-66; col 12, ln 47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3); and forming a cover layer around the center/core to produce a finished three or four layer golf ball (col 8, lns 65-66; col 12, ln 47; col 13, lns 9, 29-35, and 50-55; col 14, lns 28-33, 42-45; col 14, ln 62- col 15, ln 13; col 19, ln 23-25 and 29-31; col 19, ln 52-col 20, ln 5; and col 20, ln 50-col 21, ln 8; figs 1-3). However, Ladd et al do not teach using a composition having titanium dioxide; using a composition having the claimed percentages of components; using the claimed percentages of zinc oxide and barytes;

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compression molding at the claimed temperature and time period; and centerless grinding the core. The admitted prior art teaches a golf ball core having 68% polybutadiene, 21% zinc diacrylate, 1.8% titanium dioxide; 0.2% peroxide; and centerless grinding. Ladd et al and the admitted prior art are combinable because they are analogous with respect to molding golf ball centers. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the percentages of the admitted prior for the composition of Ladd et al, and to centerless grind the core of Ladd et al in order to form a round core having good characteristics. In regard to using the claimed percentages of zinc oxide and barites, it is well-known in the molding art that the amount of fillers used is dependent on the desired final product. The amount of filler used is well-known in the molding art as an important molding parameter and the desired percentages would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, claimed percentages are well-known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed percentages of zinc oxide and barites in the process of Ladd et al in order to form a core having good characteristics. In regard to compression molding under the claimed temperature and time period, temperature and duration are well-known in the molding art as important molding parameters and the desired temperature and duration would have been obviously and readily determined through routine experimentation by one having ordinary skill in the art at the time the invention was made. Further, claimed temperature and duration are generally well-

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known in the molding art and it would have been obvious to one of ordinary skill in the art at the time the invention was made to compression mold under the claimed temperature and duration in order to form a core having good characteristics.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Asakura (USPN 6004226) teach the state of compression molding golf ball cores. Ohama (USPN 6572493) teach molding a golf ball core having a hardness gradient. Sullivan et al (USPN 5833553) teach cooling a golf ball core with water.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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EDMUND H. LEE  
Primary Examiner  
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EHL

  
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